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Alexithymia and emotional awareness in anorexia nervosa: Time for a shift in the measurement of the concept?

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ABSTRACT

The present study compared 35 patients with anorexia nervosa (AN) with an age matched control group using the Toronto Alexithymia Scale (TAS-20; a self-report instrument) and the Levels of Emotional Awareness Scale (LEAS; a performance-based instrument). Depression and anxiety have been shown to account for elevated levels of alexithymia in AN, and an elevated level of perfectionism might affect self-reporting in general. The AN-group reported a higher level of alexithymia on the TAS-20 compared to the control group, a difference that disappeared after controlling for depression or anxiety (but not for perfectionism). The findings suggest that the AN-patients believe that they have difficulties in identifying and reporting emotions, but actually perform as well as the control group when confronted with the task of identifying and reporting their emotions according to LEAS. It might be time to rethink the measurement of alexithymia. Maybe, similar to assessment of personality disorders, it should not be assessed when patients are depressed, or it should be assessed through instruments and modalities that are not sensitive to the mood state of the patient.

1. Introduction

Taylor, Bagby, and Parker (1997) have defined alexithymia as four clusters of cognitive and affective characteristics: difficulty identifying feelings and differentiating feelings from the sensations of emotional arousal, difficulty describing feelings to others, scarcity of fantasies, and externally oriented thinking.

High levels of alexithymia, measured by the Toronto Alexithymia Scale (TAS-20; Bagby, Parker, & Taylor, 1994), has been reported among patients with anorexia nervosa (AN) with rates varying between 23% and 77% (Eizaguirre, De Cabezon, De Alda, Olariaga, & Maite, 2004). In non-clinical groups the rate varies between 0% and 28% (Quinton & Wagner, 2005). When using the TAS-20, significant correlations appear with depression and anxiety in the general population (Bydlowski et al., 2005; Honkalampi, Hintikka, Tanskanen, Lehtonen, & Viinamaki, 2000) and among eating disorder (ED) samples (e.g., Bydlowski et al., 2005; Eizaguirre et al., 2004). Corcos et al. (2000) found that scores in the TAS-20 were no longer differentiated between AN and bulimia nervosa (BN) after controlling for depression, and higher scores on Beck Depression Inventory explained the elevated levels of TAS-20 among patients with ED (Sexton, Sunday, Hurt, & Halmi, 1998). Additionally, Montebarocci et al. (2006) found that high TAS-20 scores among patients with ED, compared to healthy matched controls, were mainly related to negative affect. However, Bydlowski et al. (2005) found that the difference between the AN-group and a matched control group disappeared after controlling for depression, but not for anxiety. Thus, the findings are mixed with regard to the role of anxiety concerning alexithymia in AN. Starvation or low nutritional status affects the individual's mood, perception, attention and cognitions through several pathways (Altemus & Gold, 1992; Cowen, Anderson, & Fairburn, 1992; Pirke, 1996) and therefore might be an important factor explaining some of the mixed findings. Some studies suggest that many aspects of symptoms and anomalies seen in AN might be a consequence of low nutritional status that complicate the interpretation of personality data (Vitousek & Manke, 1994). Depression and anxiety are well-known correlates of starvation and low nutritional status (Pollice, Kaye, Greeno, & Weltzin, 1997), and it seems plausible that the high TAS-20 scores reported by patients with AN are more attributable to negative affect (depression and/or anxiety) or the effect of starvation on attention, perception and cognition than to the core psychopathology of AN per se. Consequently, nutritional status and starvation might be confounding variables. To control for possible influence of negative affect on emotional processing, as well as other potential effect of starvation (such as narrow attention), we studied a sample of patients with AN who no longer were severely malnourished (i.e. they had received inpatient treatment to cease starvation, established regular eating and showed improvement in their nutritional status based on medical examination and laboratory data). Statistical control for depression or anxiety is in our view not a sufficient remedy, as low nutritional status might also more directly affect emotional processing.

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1.2. Measuring alexithymia

The TAS-20 assesses three factors: difficulty identifying feelings and distinguishing them from bodily sensations (DIF), difficulty describing feelings to others (DDF) and, an externally oriented thinking (EOT). Researchers have highlighted potential problems with the TAS-20 (Lane et al., 1996; Lundh, Johnsson, Sundqvist, & Olsson, 2002; Lundh & Simonsson-Sarnecki, 2001). First, the DIF and DDF subscales require the respondents, paradoxically, to be aware of their lack of emotional awareness and diminished capacity to describe feelings. What might be reported is their beliefs about their ability and not alexithymia (Lundh et al., 2002). A remedy to this potential measurement error is the concurrent use of a performance-based instrument, such as the Levels of Emotional Awareness Scale (LEAS; Lane, Quinlan, Schwartz, Walker, & Zeitlin, 1990). The LEAS and TAS-20 could be viewed as indexing somewhat overlapping constructs and a joint use of both measures has been proposed to better answer inquiries concerning emotional abilities (e.g. Bydlowski et al., 2005). However, their intercorrelation ranges from positive to none, and negative (Lane et al., 1996; Lumley, Gustavson, Partridge, & Labouvie-Vief, 2005; Lundh et al., 2002; Subic-Wrana, Bruder, Thomas, Lane, & Kohle, 2005; Waller & Scheidt, 2004).

A second potential problem with the TAS-20 is that personal standards might affect the evaluation of one's emotional abilities. Respondents high in personal standards (i.e. those high on perfectionism) will probably score higher on the TAS-20 (indicating higher level of alexithymia). In non-clinical groups perfectionism has been found to correlate with and, predict the TAS-20 scores even when controlling for negative affect (Lundh et al., 2002). According to Frost, Marten, Lahart, and Rosenblate (1990) who developed the Multidimensional Perfectionism Scale, MPS, "perfectionism involves high standards of performance which are accompanied by tendencies for overly critical evaluations of one's behavior" (p. 450). A plausible assumption is that controlling for various aspects of perfectionism might avoid the possible confounding effect on the TAS-20 (Lundh et al., 2002).

AN is a condition characterized by low Body Mass Index (BMI ≤ 17.5) and overvaluation of shape and weight. Perfectionism is a well-known characteristic in AN (Bardone-Cone et al., 2007) and a risk factor for developing AN (Fairburn, Cooper, Doll, & Welch, 1999). If emotional awareness is truly reduced among AN-patients, we should expect to find significant differences between the AN, and the matched control group concerning both the TAS-20 and LEAS, even after controlling for perfectionism, depression, and anxiety. If AN-patients score high only on the TAS-20, and not the LEAS, then it might be more indicative of a *low belief* in their emotional abilities. Further, given the known relatively high level of TAS-20 among patients with AN, if perfectionism is significantly correlated to the TAS-20, it might suggest that high perfectionist standards in AN play a role in how the patients respond to items in TAS-20.

The aims of the present study were to investigate 1) the associations between the TAS-20, LEAS, and perfectionism in an AN-group and a matched control group, and 2) whether the expected significant difference on the TAS-20 and LEAS between the groups would remain after controlling for perfectionism, depression and anxiety.

Based on earlier research and theoretical constructs underlying the TAS-20 and LEAS, if patients with AN genuinely suffer from emotional processing difficulties beyond the acute phase of starvation and negative affect, we hypothesized that (1) the TAS-20 and LEAS would be slightly correlated to each other (showing a low, negative correlation), and that perfectionism would be significantly correlated to the TAS-20 total score, but not to LEAS, and (2) when controlling for perfectionism, depression, or anxiety, the group difference concerning the TAS-20 would disappear in contrast to LEAS where they would remain.

2. Method

2.1. Participants

The AN-group ($N = 35$) was recruited from four regional psychiatric clinics in Sweden after transition from inpatient to outpatient care. To be included the patients had to be 15–30 years old, and diagnosed with AN according to the DSM-IV (American Psychiatric Association, 1994) when referred to the inpatient treatments for ED. Furthermore, they should have established regular eating, and in a stable enough physical and psychological condition (based on medical examination, laboratory data and team judgment) to receive outpatient treatment. Although none of the patients was in an acute starvation phase, a significant portion of them ($N = 10$, i.e. 28.6%) was still severely underweight (BMI ≤ 17.5). As will be explained later, to refine the picture, separate sub-group analyses were done to investigate the role of low BMI, despite improving serum levels, on alexithymia/emotional awareness. Including only weight restored patients and excluding those that are underweight without being at the acute phase of starvation would severely limit any generalizations to patients with AN in general. During a nine-month recruitment period, forty-five patients consented to participation in the study, of which ten were excluded as they had attained stable weight and were no longer clinical cases of AN in need of outpatient treatment.

All participants were female, and the control group ($N = 35$) who were matched to the AN-group on age was high school students and hospital staff. They should not have had any history of psychiatric disorders or severe physical conditions that demanded treatment (information obtained through interview). A total of 50 potential participants were screened according to the inclusion and exclusion criteria.

2.2. Procedure

The ethics committee at the University of Gothenburg, medical faculty, approved the study. Patients were recruited via flyers distributed at psychiatric clinics for eating disorders. After receiving more information they signed an informed consent, and attended an assessment session. For participants younger than 18, informed consent was required from parents.

The assessment aimed to decide whether the patients were in a good enough condition (i.e. had established regular eating as opposed to severe starvation) regarding concentration, energy, and physical status, to answer the questionnaires. The interval between discharge from inpatient treatment and the data collection varied from 1 to 6 months due to motivational issues, difficulties in concentrating or other signs of starvation, and practical difficulties to arrange suitable interview time.

The control group was recruited via ads in a regional and local newspaper as well as flyers at the hospitals. Both groups received compensation for traveling expenses and $30 for participation.

2.3. Measures

2.3.1. Toronto Alexithymia Scale

The TAS-20 (Bagby, Parker, et al., 1994) is the most widely used measure of alexithymia. It consists of three subscales: difficulty identifying feelings and distinguishing them from bodily sensations (DIF); difficulty describing feelings to others (DDF); and an externally oriented style of thinking (EOT). The measure has shown evidence of good internal consistency and test–retest reliability, a 3-factor structure congruent with the alexithymia construct (Bagby, Parker, et al., 1994) as well as convergent, discriminant, and concurrent validity (Bagby, Taylor, & Parker, 1994). Using confirmatory factor analysis, Parker, Taylor, and Bagby (2003) found the 3-factor structure replicable in a community sample (and separately in both sexes). The twenty items are rated on a 5-point Likert scale and a cut-off score of 61 has been suggested to be related to alexithymia.